Course Code: EITG - 103
Course Title: Fundamentals of Computer

Number of Credits: 03 **Total Hours: 42** **Total Marks: 75**

Prerequisites for the course

Student should be English literate

Objectives of Course

1. To understand fundamentally the general scope of the computer system
2. To interact effectively with the computer
3. To know the computer peripherals
4. To manage the storage fundamentals
5. To know the basics of Operating System
6. To know some basic PC Specifications

Course Content

Unit I	**Introduction to Computers**	**2 Hours**

Introduction, Definition, .Characteristics of computer, Evolution of Computer, Block Diagram Of a computer, Generations of Computer, Classification Of Computers, Applications of Computer, Capabilities and limitations of computer.

Unit II	**Computer Peripherals: Internal Components**	**8 Hours**

IDE and SATA Devices: Hard Disk Drive and CD/DVDs Drives, Floppy Disk, Zip Drive, Backup Drive. Expansion Cards: LAN Card, IDE Card , VGA and SVGA Cards, Sound Card, Interface Cards, I/O cards, Video Cards, USB Card, Fire-Wire Cards, Internal Ports, Cables and Connector Types.

Unit III	**Computer Peripherals: External Components**	**8 Hours**

Monitors: CRT, LCD and LED Displays. Printers: Dot-Matrix Printer, Inkjet Printer, Laser Printer
Scanner: Photo Scanner, Documents Scanner, Bar Cord Scanner. Keyboards, Mouse, External Modem, Ports and Connectors, Batteries, Power supply, Pen Drives, SCSI interface devices, Laptop Computers, Digital Advance storage technology.

Unit III	**Storage Fundamentals**	**8 Hours**

Primary Vs Secondary Storage, Data storage & retrieval methods. Primary Storage: RAMROM, PROM, EPROM, EEPROM. Secondary Storage: Magnetic Tapes, Magnetic Disks. Cartridge tape, hard disks, Floppy disks Optical Disks, Compact Disks, Zip Drive, Flash Drives.

Unit V	**Operating System Basics**	**8 Hours**

Functions, Measuring System Performance, Assemblers, Compilers and Interpreters. Batch Processing, Multiprogramming, Multi-Tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux.

Unit VI	**PC Specifications**	**8 Hours**

CPU: Generation, core, threads, RAM, Storage, System type OS Specifications, Ports available, Battery specifications, Comparison of Competitive brands

Pedagogy

Lectures/Tutorial/Assignments

Course Outcome

On completion of the course, students will be able to:

1. Bridge the fundamental concepts of computers with the present level of knowledge of the students
2. Familiarise with operating systems, programming languages, peripheral devices.
3. Understand storage fundamentals

References/Readings

1. Reema Thareja, Fundamentals of Computers.
2. V. Rajaraman, 6th Edition Fundamentals of Computers, Neeharika Adabala.
3. Anita Goel, Computer Fundamentals.
4. Deborah Morley and Charles S. Parker; Fundamentals of Computers; Cengage Learning, India edition; 2009.
5. Alexis Leon and Mathews Leon; Fundamentals of Information Technology; Vikas Publication, Chennai.
6. Peter Nortons- Introduction to Computers, Sixth Edition, Published by Tata McGraw Hill
7. P K Sinha &Priti Sinha – Computer Fundamentals , Fourth Edition, BPB Publications.
8. Fundamentals of Computers, V Rajaraman 6th edition PHI Learning Private Limited 2014
9. Nasib Singh Gill: Handbook of Computer Fundamentals, Khanna Books Publishing Co.(P) Ltd., New Delhi, 2016.
10. Data communications and Networking, Behrouz A Forouzan, Tata Mc Graw-Hill 5th edition, 2013